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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

SEP 23 1997

OFFICE OF  
THE INSPECTOR GENERAL

MEMORANDUM

SUBJECT: Results of Assessment of Controls Over Emergency  
Removal Actions at Methyl Parathion Sites  
Report No. E1SFB7-06-0020-7400069

FROM: Elissa R. Karpf *Elissa R. Karpf*  
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for External Audits

TO: Timothy Fields, Jr.  
Acting Assistant Administrator  
for Solid Waste and Emergency Response

Attached is our assessment of the controls over disbursements and other activities related to emergency removal actions at methyl parathion sites. Our assessment indicates that Agency controls over several aspects of the removal process could be strengthened with clarification of existing guidance or with the development of additional national guidance. The attached discussion focuses on:

- the potential for inadequate resources and procedures for implementing a new sampling approach,
- inconsistencies in decisions to conduct cleanups at businesses,
- the potential for fraudulent and excessive relocation costs,
- inconsistencies in documentation of personal property records, and
- the potential for increased costs and delays in completion of residential restorations.



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Also included are suggestions that we believe will provide greater consistency and strengthen the Agency's controls in future similar emergency responses. We look forward to receiving written comments with proposed actions that your office may take in response to our suggestions within the next 120 days.

We appreciate the collaborative efforts of the Office of Emergency and Remedial Response in providing us information and insight to facilitate our review. During our field visits, we spoke with many individuals who were very receptive to our observations and who expended considerable time and effort in protecting the health of hundreds of families affected by the methyl parathion contamination. We commend the efforts put forth by the individuals who assisted us. We believe the way the Agency worked with the Office of Inspector General staff in discussing the problems and identifying solutions demonstrates a shared commitment to improve Agency operations and protect government funds.

If you or your staff have any questions, please contact Dave Boyce, Audit Manager in our Dallas office, at (214) 665-6621.

Attachment

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## ASSESSMENT OF EMERGENCY REMOVAL ACTIONS AT METHYL PARATHION SITES

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### INTRODUCTION

Based on concerns raised by the Environmental Protection Agency's (Agency) program officials, we conducted an assessment of controls over emergency removal actions at methyl parathion sites. The overall objective of the assessment was to determine the adequacy and appropriateness of Agency policies and procedures to perform emergency removal actions. In particular, we focused on those policies and procedures which addressed sampling, relocation, decontamination, and restoration.

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### BACKGROUND

Methyl parathion is a highly toxic pesticide registered for use on several agricultural crops and is restricted to outdoor use. This type of pesticide typically affects the capability of the human central nervous system to regulate itself. Exposure, which may occur through contact, inhalation, or ingestion, can cause serious illness and even death. Methyl parathion readily breaks down in the environment through a combination of natural sunlight, water, and biological actions, but does not readily degrade indoors.

The Office of Solid Waste and Emergency Response (OSWER) issued Directive 9360.3-12, dated August 12, 1993, which provided guidance on the use of authority under section 104 (a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, to conduct indoor response actions such as the methyl parathion emergency. This directive clarifies that CERCLA section 104 authority should be used only in instances of a release or threat of release of a hazardous substance into the environment and only when such release or threat of release poses a hazard to public health or welfare or the environment. A finding of imminent and substantial endangerment of a pollutant or contaminant must also exist.

The Agency's initial involvement with methyl parathion contamination in residences was in Lorain County, Ohio, in December 1994. Ohio health officials alerted the Agency that

## **Assessment of Emergency Removal Actions at Methyl Parathion Sites**

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hundreds of residences might have been contaminated with methyl parathion. The Agency, using various resources, temporarily relocated 869 residents, and decontaminated and restored 233 homes. Removal actions at the Lorain County site were completed in February 1996, at a cost of approximately \$18,500,000.

Less than a year later, in November 1996, the State of Mississippi requested the Agency's assistance in responding to a public health hazard posed by the illegal application of methyl parathion in homes and businesses in and around Jackson County, Mississippi. One month later, the State of Louisiana requested assistance for response to methyl parathion contamination in the New Orleans area. Based on the experiences of Lorain County, the Agency responded and tested the extent of contamination, relocated residents, and decontaminated and restored residences and some businesses.

In May 1997, the State of Illinois contacted the Agency requesting assistance for response to methyl parathion contamination in the Chicago area. The Agency is in the process of planning its proposed actions for the Chicago site.

The latest Office of Emergency and Remedial Response (OERR) Methyl Parathion Response Status report, dated September 5, 1997, shows costs obligated for removal actions at each state as follows:

Mississippi	\$36,050,000
Louisiana	\$17,800,000
Illinois	\$ 5,500,000

In January 1997, Regions 4 and 6 contacted the Office of Inspector General (OIG) Office of Investigations (OI) regarding allegations of irregularities in some residents' relocation applications in Mississippi and Louisiana. Through OI's involvement and discussions with the Agency, we agreed to assist the Agency by assessing the adequacy of the policies and procedures used by the regions throughout the various aspects of the removal process.

The removal process, which is generally initiated by calls from individuals to an established Pesticide Hotline, consists of four phases:

- sampling,
- resident relocation,
- decontamination, and
- restoration.

A state agency collects wipe samples from high contact/high traffic areas in a residence or business. Such areas are locations with an increased probability for repeated and prolonged human contact with the potentially contaminated surface. A designated laboratory then analyzes the samples for methyl parathion. Residents were originally relocated based on health criteria developed and used by the Agency in Lorain County, Ohio. Rapid relocation of residents and decontamination of the residence occurred if methyl parathion from a wipe sample equaled or exceeded a certain level. The decontamination and restoration procedures involve the removal of contaminated food and fabric items; painting of contaminated surfaces; and removal and installation of replacement carpeting, baseboards, furnace filters, cabinets, furnishings, and non-structural building components which remain contaminated.

In May 1997, the Agency changed its criteria for relocating residents and decontaminating residences. The change resulted from a determination made by the Methyl Parathion Health Sciences Steering Committee that scientific relationships between levels of methyl parathion found in residences and levels found in urine samples taken from residents were not found to exist in other geographic locations as existed in Lorain, Ohio. The differences were attributed to site-specific circumstances, such as spray technique, house construction, and climate factors. In the absence of such site-specific correlations, the steering committee determined that methyl parathion levels in urine should become the prime determinant for relocating residents to decontaminate residences.

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**SCOPE AND  
METHODOLOGY**

Our review focused on the ongoing and proposed removal actions at three primary sites: (1) the Jackson County, Mississippi site in Region 4; (2) the New Orleans, Louisiana site in Region 6; and (3) the Chicago, Illinois site in Region 5. We coordinated our review with OIG investigators already onsite in Mississippi and Louisiana to avoid duplication of effort. We met with headquarters program officials in OERR, and program officials in Regions 4, 5, and 6. We made visits to the Jackson County and New Orleans sites to meet with the on-scene coordinators (OSC), emergency response contractors (ERCS), and representatives from the U.S. Army Corps of Engineers (Corps). Additionally, we met with the Agency for Toxic Substances and Disease Registry staff co-located with Region 6 and representatives from the Mississippi State Department of Health (MSDH), the Louisiana Office of Public Health, and the Louisiana Department of Agriculture and Forestry (LDAF).

To facilitate our review, we obtained memorandums from the Agency's Office of General Counsel to verify the Agency's authority to conduct the removal actions. Also, we obtained a copy of the *EPA National Oil and Hazardous Substances Pollution Contingency Plan (NCP)*; the *Uniform Relocation Assistance, Real Property Regulations for Federal and Federally Assisted Programs*; and *EPA Guidance on Temporary Relocations During Superfund Removal Actions* to assess relocation criteria. We reviewed files maintained at both the New Orleans and Jackson County sites to determine the effectiveness of administrative controls over relocation benefits, reimbursement of personal property, and health effects of the methyl parathion spraying.

This review, like all special reviews, was a short term study of Agency activities. It was not designed to be a detailed audit. Rather it was an information gathering survey that sought to assist the Agency by providing an assessment of the adequacy of the policies and procedures being followed for removal actions at methyl parathion sites. Thus, it was more limited in scope than an audit and, as such, did not necessarily encompass all generally accepted government auditing standards. Alternately, we conducted this review in accordance with the provisions of OIG manual chapter 118, *Special Assignments*.

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**OBSERVATIONS  
AND  
CONCLUSIONS**

Our assessment indicates that the Agency could strengthen controls over several aspects of the emergency removal process with the clarification of existing guidance and the development of additional specific national guidance. The lack of adequate national guidance has resulted in:

- the potential for inadequate resources and procedures for implementing a new sampling approach,
- inconsistencies in decisions to clean up contaminated businesses,
- the potential for fraudulent and excessive relocation costs,
- inconsistencies in the documentation of personal property items, and
- the potential for increased costs and delays in completion of residential restorations.

We discussed these concerns initially with headquarters program officials in OERR, and again during recent task force conference calls. In response, the Agency has issued several new directives that address some of the areas of concern we have raised. However, we believe that further improvements would strengthen Agency controls and further reduce future instances of fraudulent activities related to methyl parathion cleanups.

**IMPLEMENTATION  
OF NEW TESTING  
PROCEDURES**

On May 16, 1997, OSWER issued Directive 9285.7-27 which provides guidance to the regions for implementing a urine sampling protocol to test for excessive levels of methyl parathion in residents' urine. The intent of the directive was to ensure that the regions applied consistent criteria in deciding what actions to take in response to methyl parathion exposures.

In implementing the urine sampling protocol, the Agency did not adequately address:

- resources to collect and analyze the samples,

- resources for subsequent monitoring, and
- procedures for disclosure and notification of changes in residential occupancy.

The Agency delegated responsibility for testing methyl parathion levels in residents' urine to state public health agencies but did not initially ensure that these agencies had adequate resources to collect urine samples and perform subsequent monitoring. OSCs in Regions 4 and 5, and representatives from MSDH and LDAF, expressed concerns that the public health services in Louisiana, Mississippi, and Illinois lacked the resources to effectively administer the increased urine sampling and subsequent monitoring. They expressed further concerns that the Center for Disease Control in Atlanta might lack the capacity to timely test the anticipated number of samples.

Additionally, the new protocol did not address the issue of disclosure and notification when changes in residential occupancy occur. This notification and the associated need for subsequent urine sampling might be critical for new occupants, especially those with small children. A lack of clear guidance and sufficient resources for sample collection, analysis, and monitoring has the potential for reducing the effectiveness of the program as well as creating increased exposure and adverse health effects.

We recently learned that the Agency, as suggested in this assessment, has worked with the appropriate state and local officials to gain the resources needed to meet the demands for urine sampling and analysis. Additionally, the development of a long term monitoring and notification policy is still in progress.

#### **CLEANUP OF CONTAMINATED BUSINESSES**

Prior to May 1997, the Agency had no policy or guidance for making decisions to clean up businesses contaminated with methyl parathion. Consequently, regions developed inconsistent policies regarding business cleanups. Region 5 did not clean up businesses at the first site in Lorain County, Ohio. Region 4 initiated cleanups of 24 businesses, including restaurants, stores, day care centers, and churches. Region 6 initiated one business cleanup, then discontinued the practice.

This lack of consistency not only left the Agency vulnerable to criticism, but also resulted in the use of additional funds and resources for removal actions at sites that are unlikely to cause continuous exposure to methyl parathion. The funds and resources could have otherwise been available for removal actions at higher priority sites with continuous exposure.

The recently issued OSWER Directive 9285.7-27A, *Cleanup of Methyl Parathion Contaminated Businesses* (undated) provides guidance to the regions in making cleanup decisions regarding businesses contaminated with methyl parathion. The guidance provides that decisions should be based on the urine protocol criteria, especially those with resident population or residential type exposure; i.e., nursing homes, day care centers, or hospitals. Consideration should also be given to the businesses' ability to pay.

## RELOCATION COSTS

The Agency was not consistent in its application process for resident relocation eligibility or subsistence payments made to relocated residents. These inconsistencies provided the potential for fraudulent and excessive relocation costs. At both the Jackson County and New Orleans sites, the Corps, through an interagency agreement with the Agency, was responsible for processing applications for resident relocation and making subsistence payments. Corps personnel at each site established their own application process, as well as the subsistence rates and other types of expenses (i.e., laundry, taxis).

### Application Process

The Corps at each site set its own application requirements. The Corps at the Jackson County site used a detailed application process, including resident identification and household size verification. The Corps in New Orleans initially required no identification or verification from its applicants.

The Corps at the Jackson County site, with assistance from Region 4 program officials, developed draft procedures outlining the application process and eligibility requirements, including verification of residency and household size. To substantiate their eligibility, applicants could submit various documents to verify residency and household size, including drivers license, social

## **Assessment of Emergency Removal Actions at Methyl Parathion Sites**

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security number, rental agreements, rent receipts, tax returns, proof of public assistance, and/or mail.

The Corps in New Orleans initially did not require any documents to verify residency or household size. Based on a recommendation made by OIG OI, the Corps subsequently began requesting social security and drivers license numbers from its applicants. However, the Corps did not verify household size.

Additionally, OI suggested other improvements in the application process that would help the Agency protect itself against abusers and fraudulent claims. The improvements included:

- a certification and false penalties statement;
- a requirement for applicant identification/verification for release of subsistence payments;
- a medical release form; and
- simpler, separately listed questions on the questionnaire regarding source and application of methyl parathion.

OI recently learned that Region 5 is currently using contract services to develop its own application process for use by the Corps at the Chicago site. We understand from OI that the proposed application package does not require social security or drivers license numbers from applicants as recommended by OI and implemented by the Corps in New Orleans. The drafting of an additional application package by Region 5 appears to be a duplication of effort and an unnecessary expenditure of resources. A standard application package for use by all regions could have prevented the inconsistencies and reduced the potential for fraudulent or excessive claims.

### **Subsistence Costs**

The Corps also independently determined subsistence payments at the Jackson County and New Orleans sites. Corps personnel at each site used different approaches for determining per diem and

lodging rates. The rates varied between sites and were not based on any specific standard.

The process followed in Jackson County evolved from the General Services Administration (GSA)-approved daily subsistence rates to a method which based subsistence payments on three options. For Option 1, the applicant could elect to stay in government-furnished apartments, and receive a one-time incidental expense allowance of \$200. With Option 2, the applicant made his or her own arrangements and accepted a fixed amount of money based on the average daily cost of a one, two, or three bedroom apartment, and a one-time incidental expense allowance of \$200. With Option 3, the applicant made his or her own arrangements and requested reimbursement on an actual basis, not to exceed a set amount per day.

The process in New Orleans also evolved from GSA-approved daily subsistence rates. However, the method of calculation was based on the applicant making his or her own arrangements and accepting a fixed amount of \$15 per day per household, with no incidental expense allowance.

Region 5 is currently determining its own method for calculating subsistence payments.

Overall, insufficient resident verification procedures and variances in subsistence payments, not only leaves the Agency open to criticism, but also results in inequitable and potentially fraudulent payments.

#### **DOCUMENTATION OF PERSONAL PROPERTY**

We found inconsistencies in the degree of documentation maintained by the regions to identify personal property items. The regions used various contractors or the Corps to appraise and document personal property for removal and replacement purposes. Each servicing agent developed its own documentation requirements for personal property records.

Draft OSWER Publication 9360.3-18, *Guidance on Compensation for Property Loss in Removal Actions*, dated September 1996, outlines the procedures for compensating for property loss due to hazardous substance release or the resulting response effort. The guidance requires the OSC to record the condition of any property

that potentially could be damaged during response activities. Documentation must be in writing, and may be supplemented with photographs and videotapes. This documentation would be used as a basis to determine appropriate compensation after the response was complete.

The quality and sufficiency of personal property documentation varied at the different sites. Personal property records maintained at the New Orleans site included a combination of detailed videotapes and photographs (also available on CD ROM). They also included specific property descriptions and detailed appraisals on contaminated reimbursable items. In contrast, files maintained at the Jackson County site were not as specific. The files included videotapes and some photographs but included more generic descriptions and appraisal values for contaminated reimbursable items.

The lack of specific detail could expose the Agency to fraudulent claims and additional expenses should residents dispute reimbursements and/or claim items as missing or damaged. At the same time, too much documentation could result in unnecessary expenditures that outweigh the benefit derived.

#### **RESTORATION OF INDIVIDUAL RESIDENCES**

Residential restoration at the New Orleans site using Region 6's ERCS contracts proceeded more timely than restoration at the Jackson County site using Region 4's interagency agreement with the Corps. For comparative purposes, the latest OERR Methyl Parathion Response Status report, dated July 25, 1997, stated that of the 430 households requiring relocation in Mississippi, only 75 cleanup/restorations were completed. Louisiana, with cleanups initiated approximately 1 month after the start of cleanups in Mississippi, reported 187 households requiring relocation, with 182 cleanup/restorations completed.

The delays encountered in Jackson County were primarily attributed to the lengthy procurement process followed by the Corps. Initially, the Corps issued individual purchase orders for the restoration of each residence. To alleviate the delays and backlog, the Corps recently issued an indefinite delivery/indefinite quantity contract which provided for the issuance of work orders to three contractors to cover the restoration of numerous residences.

In the interim, Region 4 also issued work orders under its ERCS contracts to assist with the restoration work in Jackson County.

Region 5, also proposing to use the Corps for restoration at the Chicago site, has expressed concerns regarding funding and capacity available under its ERCS contracts should the Region need to obtain additional restoration support beyond the Corps.

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## **SUMMARY**

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The lack of clear and concise national guidance resulted in regions developing their own procedures. Regional responses could have proceeded more efficiently and with less risk to the government, had the Agency developed clear and concise national guidance.

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## **SUGGESTIONS**

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We suggest that the Acting Assistant Administrator for Solid Waste and Emergency Response:

1. Modify existing guidance and develop new guidance, as required, to address emergency removal actions at methyl parathion sites that at a minimum:
  - a. Clarifies important factors related to its protocol for testing levels of methyl parathion in residents' urine, including resources for urine sampling and monitoring, and disclosure and notification requirements for resident occupancy changes.
  - b. Outlines criteria for business cleanups, including specific eligible expenditures.
  - c. Outlines applicant eligibility procedures, including verification of residency and household size, as well as a standard for computing subsistence payments. The Agency should consider providing standard application forms for use by the Corps or other servicing agents.
  - d. Defines a standard for sufficient documentation of personal property items.

2. Encourage Region 5 to work with the Office of Acquisition Management to explore other contracting alternatives to obtain services in a timely manner, if delays are encountered and additional resources from the ERCS contracts are required.